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PATENT APPLICATION

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Title: TONE-BASED REGISTRATION FOR A MOBILE USER OF A COMMUNICATIONS SYSTEM

MAIL STOP APPEAL BRIEF - PATENTS
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BRIEF ON APPEAL

INTRODUCTION

Pursuant to the provisions of 37 CFR § 1.191 *et seq.*, Applicants hereby appeal to the Board of Patent Appeals and Interferences (the "Board") from the Examiner's final rejection dated April 14, 2004. A notice of appeal is being filed concurrently with this appeal brief. This brief on appeal is being filed in triplicate (37 CFR § 1.192(a)) and is accompanied by the requisite fee (37 CFR 1.192(a) and 1.17(f)).

REAL PARTY IN INTEREST

The entire interest in the present application has been assigned to Sprint Communications Company, L. P. as recorded at Reel 011119, Frame 0911.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

Claims 1-40 (all claims) are pending.

Claims 1-40 have been finally rejected.

Claims 1-40 are on appeal.

STATUS OF AMENDMENTS

There are no pending amendments.

SUMMARY OF INVENTION

This invention relates generally to a tone-based registration for a mobile user of a communication system, wherein the user can automatically receive communications despite moving around within the communication system. The user can automatically register with a control system and have communications automatically re-directed to the user's current location. The registration can include using a telephone network in conjunction with the control system, and can include using other networks in communication with the telephone network.

The user device exchanges audible tones, such as DTMF tones (see page 6, line 9) with the control system in order to register the user with the communication system. As a result, the user can use proximately located communication devices, such as a nearby telephone, for

example, and the communication system does not require the user to continually and manually call in and manually register the user's location.

In some examples of the invention, the user device receives a user input that requests/initiates a registration process, and then transfers call tones to a telephone in order to initiate a telephone call to a control system. The control system receives and answers the telephone call and transfers answer tones in response. The user device receives the answer tones and transfers user identification tones. The control system receives the user identification tones and a location indicator. In one embodiment, the location indicator comprises a telephone number for the telephone being used to perform the registration process. The control system processes the user identification tones and the location indicator in order to transfer acceptance tones over the telephone call and to transfer a route instruction to direct communications for the user to a communication device associated with the telephone number. The user device receives the acceptance tones and indicates successful registration to the user.

ISSUES

1. Whether claims 1-8, 15-28, and 35-40 are anticipated under 35 U.S.C. § 102(b) over U.S. Patent 5,315,636 (Patel).

2. Whether claims 9-14 and 29-34 are obvious under 35 U.S.C. § 103(a) over U.S. Patent 5,315,636 (Patel) in view of U.S. Patent 6,421,536 (Uranaka et al.).

GROUPING OF CLAIMS

For the purpose of this appeal claims 1-40 stand or fall together, sharing the common essential element of a portable user device initiating a telephone call in a communication system by automatically transferring audible call tones from the portable user device to a telephone device in response to a user registration input.

ARGUMENT

OUTLINE

I. Summary of the brief on appeal.

II. Summary of the requirements for *prima facie* anticipation and obviousness.

III. Discussion of the § 102(b) rejection of claims 1-8, 15-28, and 35-40.

IV. Discussion of the § 103(a) rejection of claims 9-14 and 29-34.

I. Summary of the brief on appeal

A. The 35 U.S.C. § 102(b) rejection of claims 1-8, 15-28, and 35-40 is improper because a *prima facie* case for anticipation has not been established, for the following reasons: (1) the cited Patel reference does not teach or suggest every element of the claims, and (2) the Examiner incorrectly characterizes the Patel reference.

B. The 35 U.S.C. § 103(a) rejection of claims 9-14 and 29-34 is improper because a *prima facie* case for obviousness has not been established, for the following reasons: (1) the cited prior art combination does not teach or suggest every element of the claims, and (2) the Examiner incorrectly characterizes the Patel reference.

II. Summary of the requirements for *prima facie* anticipation and obviousness.

The all elements rule for anticipation is well established over a long series of case law. The all elements rule states that for anticipation to exist, a single anticipating prior art reference must include all elements of a claim. *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 USPQ 81 (Fed. Cir. 1986). "When the defense of lack of novelty is based on a printed publication that is asserted to describe the same invention, a finding of anticipation requires that the publication describe all of the elements of the claims, arranged as in the patented device." *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 48 USPQ2d 1225 (Fed. Cir. 1998), *rehearing denied & suggestion for rehearing en banc declined*, 161 F.3d 1380 (Fed. Cir. 1998).

Anticipation under Section 102 can be found only if a reference shows exactly what is claimed; where there are differences between the reference disclosures and the claim, a rejection must be based on obviousness under Section 103. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2142. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim dependent therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

III. Discussion of the § 102(b) rejection of claims 1-8, 15-28, and 35-40.

Claims 1-8, 15-28, and 35-40 have been finally rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,315,636 (Patel).

Claims 1, 15, 21, and 35 require, in a portable user device, receiving a user registration

input, initiating a telephone call in the communication system by automatically transferring audible call tones from the portable user device to a telephone device in response to the user registration input, and transferring audible user identification tones over the telephone call. Claims 1, 15, 21, and 35 further require, in a control system, answering the telephone call, receiving the audible user identification tones, receiving a location indicator, processing the audible user identification tones and the location indicator to generate a route instruction, and transferring the route instruction to the communication system, wherein the route instruction routes telephone calls for the user to a communication device associated with the location indicator.

Therefore, in operation, the user holds the portable user device to the handset of a telephone and activates the device. The device *automatically* generates audible call tones and audible user identification tones into the handset. The audible call tones are generated in the portable user device (see page 10, lines 18-21) and initiate a telephone call to the control system. The audible user identification tones are likewise generated in the portable user device (see page 10, line 23 to page 11, line 3) and represent a unique code that is associated with the user within the control system (see page 7, lines 8-9). The user does not key in either the audible call tones or the audible user identification tones. These tones, along with the telephone number of the telephone being used in the registration process, are used by the control system to route calls to the telephone that are intended for the user.

Advantageously, the invention of any of the embodiments may be implemented to allow a mobile user to automatically receive communications despite moving around within a communication system. Another advantage is that the user does not have to remember or look up the telephone number corresponding to the control system and does not have to remember or look up a user identifier corresponding to the audible user identification tones. Yet another advantage is that the user does not have to register by manually dialing a number and manually entering digits. Yet another advantage is that the portable user device and the control system may, in some embodiments, determine the location of the user and the telephone number of the telephone without the need for any awareness or action on the part of the user.

The final Office Action asserts that Patel discloses initiating a telephone call in the

communication system by automatically transferring call tones from the portable user device to a telephone device in response to a user registration input. The Office Action further asserts that Patel discloses, in the portable user device, transferring audible user identification tones over the telephone call, and cites col. 11, lines 20-35 in support of these two assertions and also cites col. 11, lines 44-55.

Patel does not teach or suggest, in a portable user device, initiating a telephone call in a communication system by automatically transferring audible call tones from a portable user device to a telephone device in response to a user registration input. In contrast, in Patel the user manually initiates a telephone call to a service node by manually dialing a known control center number, and then manually keying-in a desired telephone number in which to receive calls (see col. 11, lines 35-55). The keyed-in telephone number is not necessarily the telephone number of the telephone being employed by the user. The cited text does not disclose transferring call tones from a portable user device to a telephone device, or the device of Patel initiating a telephone call. The cited text at col. 11, lines 44-55 discloses that a user in Patel enters a "local phone number" into the device of Patel (*i.e.*, the telephone number over which the user desires to receive calls), and then will "access the service node by telephone" (see col. 11, line 47). In Patel, it is clear that the user initiates the telephone call in a conventional manner, and no automatic call initiation is disclosed.

The device of Patel does not generate call tones, neither automatically or manually. The device of Patel therefore cannot transfer call tones. The device of Patel does not initiate the telephone call. Patel only transfers audible device identifier tones and audible tones that identify the local telephone number that is to be used for call forwarding (see col. 11, lines 47-55).

Independent claims 1, 15, 21, and 35 therefore include features that are neither taught nor suggested by Patel. It is respectfully submitted that a *prima facie* case of anticipation has not been established. As a result, claims 1, 15, 21, and 35 are allowable as written. Claims 2-8 16-20, 22-28 and 36-40 are dependent on claims 1, 15, 21, and 35. If an independent claim is patentable under 35 U.S.C. 102, then any claim dependent therefrom is also patentable, as a dependent claim includes all of the elements and limitations of the corresponding independent claim. Claims 1-8, 15-28, and 35-40 are allowable as written.

IV. Discussion of the § 103(a) rejection of claims 9-14 and 29-34.

Claims 9-14 and 29-34 have been finally rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent 5,315,636 (Patel) in view of U.S. Patent 6,421,536 (Uranaka et al.). The Office Action restates the assertion that Patel includes all the elements of the independent claims. As discussed above, this assertion is incorrect. Claims 9-14 and 29-34 all depend from independent claims 1 and 21 and therefore incorporate the limitations of the independent claims. Consequently, claims 9-14 and 29-34 are patentable for the reasons previously discussed. To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2142. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim dependent therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Conclusion

In view of the above, applicant respectfully request that the examiner's rejection of claims 1-40 be reversed.

Respectfully submitted,

Date: 6/15/04

SIGNATURE OF PRACTITIONER

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APPENDIX I
CLAIMS CURRENTLY PENDING

1. [Twice Amended] A method of registering a user with a communication system, the method comprising:

in a portable user device, receiving a user registration input;

in the portable user device, initiating a telephone call in the communication system by automatically transferring audible call tones from the portable user device to a telephone device in response to the user registration input;

in the portable user device, transferring audible user identification tones over the telephone call;

in a control system, answering the telephone call;

in the control system, receiving the audible user identification tones;

in the control system, receiving a location indicator;

in the control system, processing the audible user identification tones and the location indicator to generate a route instruction; and

in the control system, transferring the route instruction to the communication system, wherein the route instruction routes telephone calls for the user to a communication device associated with the location indicator.

2. [Once Amended] The method of claim 1 wherein transferring the audible user identification tones over the telephone call comprises:

in the control system, transferring answer tones over the telephone call in response to answering the telephone call; and

in the portable user device, receiving the answer tones over the telephone call, and in response, automatically transferring the audible user identification tones from the portable user device and over the telephone call.

3. [Once Amended] The method of claim 1 wherein transferring the audible user identification tones over the telephone call comprises waiting for a time period after transferring the audible call tones for the telephone call to be established and then transferring the audible user identification tones from the portable user device and over the telephone call.

4. [Once Amended] The method of claim 1 wherein receiving the location indicator in the control system comprises receiving Automatic Number Identification (ANI) from a telephone network indicating a telephone number of the telephone device.

5. [Twice Amended] The method of claim 1 wherein receiving the location indicator in the control system comprises:

in the control system, transferring location request tones over the telephone call to the telephone device if Automatic Number Identification (ANI) is not available;

in the portable user device, receiving the location request tones from the telephone device, and in response, indicating to the user that input of the location indicator is required; and

in the control system, receiving location tones from the telephone device representing the location indicator.

6. [Twice Amended] The method of claim 5 further comprising, in the portable user device, receiving a user location input, and in response, transferring the location tones to the telephone device.

7. [Once Amended] The method of claim 5 wherein the location indicator comprises a telephone number of the telephone device.

8. [Once Amended] The method of claim 1 further comprising:

in the control system, processing the audible user identification tones and the location indicator to transfer acceptance tones over the telephone call; and

in the portable user device, receiving the acceptance tones over the telephone call, and in response, indicating successful registration to the user.

9. [Original] The method of claim 1 wherein the communication device comprises another telephone.

10. [Original] The method of claim 1 wherein the communication device comprises a computer.

11. [Original] The method of claim 1 wherein the communication device comprises a video terminal.

12. [Original] The method of claim 1 wherein the communication device comprises a facsimile machine.

13. [Original] The method of claim 1 wherein the communication device comprises a LAN printer.

14. [Original] The method of claim 1 wherein the communication device comprises a network drive.

15. [Twice Amended] A method of operating a portable user device to register a user with a communication system, the method comprising:

receiving a user registration input in a device controller of the portable user device;

in response to the user registration input, the device controller transferring a call signal to a tone generator of the portable user device and transferring a user identification signal to the tone generator;

receiving the call signal in the tone generator;

in response to the call signal, the tone generator transferring audible call tones from the portable user device to a telephone device to initiate a telephone call;

receiving the user identification signal in the tone generator from the device controller,

in response to the user identification signal, the tone generator transferring audible user identification tones from the portable user device to the telephone device.

16. [Original] The method of claim 15 wherein transferring the user identification signal to the tone generator further comprises:

receiving answer tones in the tone detector, and in response, transferring an answer signal to the device controller; and

receiving the answer signal in the device controller, and in response, transferring the user identification signal to the tone generator.

17. [Once Amended] The method of claim 15 further comprising:

receiving acceptance tones in the tone detector, and in response, transferring an acceptance signal to the device controller;

receiving the acceptance signal in the device controller, and in response, transferring an indication signal to an indicator of the portable user device; and

receiving the indication signal in the indicator, and in response, indicating successful registration to the user.

18. [Original] The method of claim 15 further comprising:

receiving location request tones in the tone detector, and in response, transferring a location request signal to the device controller;

receiving the location request signal in the device controller, and in response, transferring an indication signal to the indicator; and

receiving the indication signal in the indicator, and in response, indicating to the user that input of a location indicator is required.

19. [Once Amended] The method of claim 18 wherein the location indicator comprises a telephone number of the telephone device.

20. [Twice Amended] The method of claim 18 further comprising:

receiving a user location input representing the location indicator in the device controller, and in response, transferring a location signal to the tone generator;

receiving the location signal in the tone generator, and in response, transferring location tones representing the location indicator from the portable user device to the telephone device.

21. [Twice Amended] A communication system for registering a user, the communication system comprising:

a portable user device configured to receive a user registration input, automatically transfer audible call tones from the portable user device to a telephone device in response to the user registration input to initiate a telephone call in the communication system, and to transfer audible user identification tones from the portable user device and over the telephone call; and

a control system configured to answer the telephone call from the portable user device, receive the audible user identification tones, receive a location indicator, and in response, process the audible user identification tones and the location indicator, generate a route instruction, and transfer the route instruction to the communication system, wherein the route instruction routes telephone calls for the user to a communication device associated with the location indicator.

22. [Once Amended] The communication system of claim 21 wherein:

the control system is configured to transfer answer tones over the telephone call in response to answering the telephone call;

the portable user device is configured to receive the answer tones over the telephone call, and in response, automatically transfer the audible user identification tones from the portable user device and over the telephone call.

23. [Once Amended] The communication system of claim 21 wherein the portable user device is configured to wait for a time period after transferring the audible call tones for the telephone call to be established and then transfer the audible user identification tones over the telephone call.

24. [Once Amended] The communication system of claim 21 wherein the control system is configured to receive Automatic Number Identification (ANI) from a telephone network indicating a telephone number of the telephone device as the location indicator.

25. [Twice Amended] The communication system of claim 21 wherein:

the control system is configured to transfer location request tones over the telephone call if Automatic Number Identification (ANI) is not available, and to receive location tones from the telephone device representing the location indicator; and

the portable user device is configured to receive the location request tones from the telephone device, and in response, indicate to the user that input of the location indicator is required.

26. [Twice Amended] The communication system of claim 25 wherein the portable user device is configured to receive a user location input from the user, and in response, transfer the location tones to the telephone device.

27. [Once Amended] The communication system of claim 25 wherein the location indicator comprises a telephone number of the telephone device.

28. [Once Amended] The communication system of claim 21 wherein:

the control system is configured to process the audible user identification tones and the location indicator to transfer acceptance tones over the telephone call; and

the portable user device is configured to receive the acceptance tones over the telephone call, and in response, indicate successful registration to the user.

29. [Original] The communication system of claim 21 wherein the communication device comprises another telephone.

30. [Original] The communication system of claim 21 wherein the communication device comprises a computer.

31. [Original] The communication system of claim 21 wherein the communication device comprises a video terminal.

32. [Original] The communication system of claim 21 wherein the communication device comprises a facsimile machine.

33. [Original] The communication system of claim 21 wherein the communication device comprises a LAN printer.

34. [Original] The communication system of claim 21 wherein the communication device comprises a network drive.

35. [Twice Amended] A portable user device for registering a user with a communication system, the portable user device comprising:

a device controller configured to receive a user registration input, and in response, transfer a call signal and transfer a user identification signal; and

a tone generator configured to receive the call signal, and in response, transfer audible call tones from the portable user device to a telephone device to initiate a telephone call in the communication system, to receive the user identification signal from the device controller, and in response, transfer audible user identification tones from the portable user device to the telephone device and over the telephone call.

36. [Twice Amended] The portable user device of claim 35 wherein:

the tone detector is configured to receive answer tones from the telephone device, and in response, transfer an answer signal to the device controller; and

the device controller is configured to receive the answer signal, and in response, transfer the user identification signal to the tone generator.

37. [Twice Amended] The portable user device of claim 35 wherein:

the tone detector is configured to receive acceptance tones from the telephone device, and in response, transfer an acceptance signal to the device controller;

the device controller is configured to receive the acceptance signal, and in response, transfer an indication signal; and further comprising

an indicator configured to receive the indication signal, and in response, indicate successful registration to the user.

38. [Once Amended] The portable user device of claim 35 wherein:

the tone detector is configured to receive location request tones, and in response, transfer a location request signal to the device controller;

the device controller is configured to receive the location request signal, and in response, transfer an indication signal; and further comprising

an indicator configured to receive the indication signal, and in response, indicate to the user that input of a location indicator is required.

39. [Twice Amended] The portable user device of claim 38 wherein the location indicator comprises a telephone number of the telephone device.

40. [Twice Amended] The portable user device of claim 38 wherein:

the device controller is configured to receive a user location input representing the location indicator, and in response, transfer a location signal to the tone generator;

the tone generator is configured to receive the location signal, and in response, transfer location tones representing the location indicator from the portable user device to the telephone device.